

Abstract Of The Disclosure

A cassette for a SOFC stack formed by stamping a separator plate, stamping a frame, attaching a PEN cell to the frame, and attaching the frame to the separator plate. An insulating seal, preferably formed of glass, is provided between the PEN cell and the frame to provide electrical isolation between the frame and the separator plate. Electrical isolation is further provided by forming an insulating seal, preferably formed of glass, between the frame and the separator plate. A plurality of cassettes formed may be formed into a SOFC stack by sealing successive cassettes on top of one and another so that the anode side of each cassette is in electrical communication with the cathode side of each adjacent cassette, and forming an electrically isolated and gas tight seal between the frame of each cassette and the separator plate of each adjacent cassette. Separator plates and the frames are configured so that when a series of separator plates and frames having PEN cells are stacked together, (thereby forming a stack alternating between the two; separator plate/frame/separator plate/frame/ etc...), two separate pathways for gaseous flow are formed.